

IN THE CLAIMS:

1-17. (Canceled).

18. (Previously Presented) A chemical feed system for a foam dispenser, comprising:
a motor;
a pump unit;
a drive transmission system in line between said motor and pump unit, said drive transmission system comprising a magnetic coupling assembly having a first magnetic coupling member and a second magnetic coupling member and an intermediate shroud positioned between said first and second magnetic coupling members and sealing fluid within said pump unit wherein said shroud has a chemical reception cavity; and
an isocyanate feed inlet port that feeds isocyanate to the chemical reception cavity,
wherein said shroud has a side wall and an upper cover which together define a sealed chemical reception cavity in which one of said first and second magnetic coupling members is received, and
wherein a reactant foam precursor chemical flows between an interior surface of said shroud and the magnetic coupling member which is positioned in the chemical reception cavity formed within said shroud and is coupled to said pump unit, and the other magnetic coupling member is driven by said motor and drives said second magnetic coupling member,
wherein said drive transmission system includes a drive transmission shaft, and said pump unit includes an inlet pump manifold and an outlet pump manifold with said shroud fastened to said outlet pump manifold, and said outlet pump manifold includes a manifold reception cavity within which said drive transmission shaft axially extends, and said drive transmission shaft is supported by a first bearing device also received within the manifold reception cavity of said output pump manifold, and
wherein said inlet pump manifold and outlet pump manifold are in a vertically stacked arrangement with said inlet manifold having a filter extending across a lower region of said inlet manifold such that an extension of a central axis of elongation of said drive shaft away from a free end of said drive shaft intercepts a filtering surface of said filter.

19. (Canceled).

20. (Original) The system of claim 18 wherein said shroud includes a cylindrical side wall, an upper cap and a lower end, and said first magnetic coupling member includes a shroud reception cavity for receiving an upper region of said shroud, and said second magnetic coupling member is received within the chemical reception cavity defined by an inner surface of the side wall of said shroud.

21. (Previously Presented) The chemical feed system as recited in claim 18 wherein said transmission shaft has a drive transmission upstream end received within said second magnetic coupling member and a downstream end, and wherein said first magnetic coupling member has a raised upper section with threaded aperture for receiving a drive shaft of said motor.

22. (Canceled).

23. (Previously Presented) The chemical feed system as recited in claim 18 wherein a magnetic ring portion of said second magnetic coupling member is fully received within the chemical reception cavity of said shroud.

24. (Canceled).

25. (Previously Presented) A chemical feed system for a foam dispenser, comprising:
a motor;
a pump unit;
a drive transmission system in line between said motor and pump unit, said drive transmission system comprising a magnetic coupling assembly having a first magnetic coupling member and a second magnetic coupling member and an intermediate shroud positioned between

said first and second magnetic coupling members and sealing fluid within said pump unit, and wherein said shroud has a chemical reception cavity into which chemical flows,

wherein said drive transmission system includes a drive transmission shaft, and said pump unit includes an inlet pump manifold and an outlet pump manifold with said shroud fastened to said outlet pump manifold, and said outlet pump manifold includes a manifold reception cavity within which said drive transmission shaft axially extends, and said drive transmission shaft is supported by a first bearing device also received within the manifold reception cavity of said output pump manifold, and wherein said drive transmission system further comprises a second bearing device also received within said manifold reception cavity to provide bearing support to said drive transmission shaft and which second bearing device is axially spaced apart from said first bearing device, and

wherein said second magnetic coupling member is received within said shroud and is spaced from said shroud as to have a fluid intermediate layer between a peripheral surface of said second magnetic coupling member and an interior surface of said shroud extending about said peripheral surface, and wherein said drive transmission shaft has an enlarged section positioned between two radially smaller sections, and said first and second bearing sections being received within said two radially smaller sections.

26-55. (Canceled).

56. (Previously Presented) The chemical feed system as recited in claim 18 wherein the chemical feed system is for a polyurethane foam dispenser.

57. (Previously Presented) The chemical feed system as recited in claim 18 further comprising a source of isocyanate for feeding the isocyanate to a polyurethane foam dispenser.

58. (Previously Presented) The chemical feed system of claim 18 wherein the filtering surface of said filter extends perpendicular with respect to said central axis.

59. (Previously Presented) The chemical feed system of claim 18 wherein said inlet manifold is comprised of a set of stacked plates, and the filtering surface extends parallel with opposing, contact surfaces of the stacked plates.

60. (Previously Presented) The chemical feed system of claim 59 wherein said filter is supported by an annular ring connected with the stacked plates, with the filtering surface being suspended above a bottom surface of the annular ring.

61. (Previously Presented) The chemical feed system of claim 18 wherein said inlet manifold includes a base region with a fluid reception cavity in which is positioned a free end of said drive shaft and said filter extends across a bottom region of the fluid reception cavity.

62. (Previously Presented) The chemical feed system as recited in claim 18 wherein said inlet manifold comprises a base plate having a recess into which a free end of said drive shaft extends and an annular base ring, and which base ring is in contact with said base plate with said filter being suspended above a lowermost edge of said annular ring.

63. (Previously Presented) The chemical feed system of claim 18 wherein said filter has a fluid contact surface having an area greater than a maximum diameter of a fluid inlet conduit of said pump extending downstream of the fluid reception cavity.

64. (Previously Presented) A chemical feed system for a foam dispenser, comprising:
a motor;
a pump unit;
a drive transmission system in line between said motor and pump unit, said drive transmission system comprising a magnetic coupling assembly having a first magnetic coupling member and a second magnetic coupling member and an intermediate shroud positioned between said first and second magnetic coupling members and sealing fluid within said pump unit wherein said shroud has a chemical reception cavity; and
an isocyanate feed inlet port that feeds isocyanate to the chemical reception cavity,

wherein said shroud has a side wall and an upper cover which together define a sealed chemical reception cavity in which one of said first and second magnetic coupling members is received, and

wherein a reactant foam precursor chemical flows between an interior surface of said shroud and the magnetic coupling member which is positioned in the chemical reception cavity formed within said shroud and is coupled to said pump unit, and the other magnetic coupling member is driven by said motor and drives said second magnetic coupling member,

wherein said drive transmission system includes a drive transmission shaft, and said pump unit includes an inlet pump manifold, said inlet pump manifold including a base end in which is formed a fluid reception cavity, and said pump unit further comprising an annular base and a filter which is supported by said annular base in suspended fashion and has a fluid contact surface that extends across the fluid reception cavity as to be parallel with a cross-sectional plane extending perpendicular to an axis of elongation of said drive shaft.

65. (Previously Presented) The system of claim 64 wherein a free end of said drive shaft extends into the fluid reception cavity.

66. (Previously Presented) The chemical feed system of claim 64 wherein said filter has the fluid contact surface having an area greater than a maximum diameter of a fluid inlet conduit of said pump extending downstream of the fluid reception cavity.